

SOLID WASTE MANAGEMENT PLAN FOR SAN MATEO COUNTY, CALIFORNIA

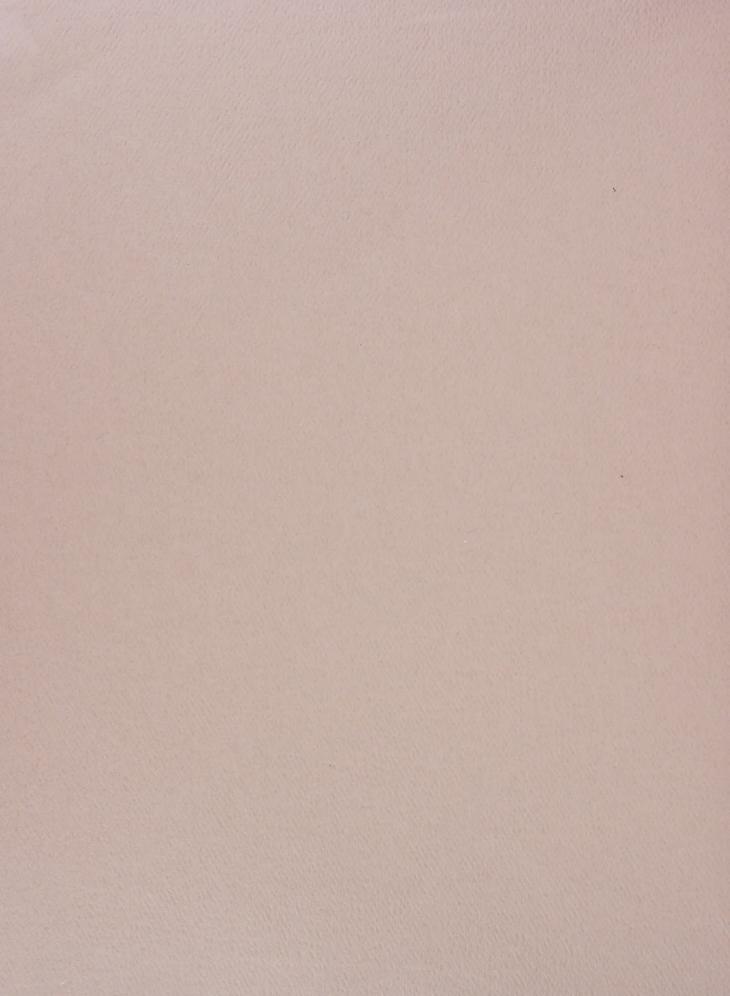
SUMMARY OF FINAL REPORT (NOVEMBER, 1975)

INSTITUTE OF GOVERNMENTAL STUDIES HARARY

JUL 25 1989

UNIVERSITY OF CALIFORNIA

Prepared by the
County Engineering and Road Department
in collaboration with the
Solid Waste Advisory Committee



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## ACKNOWLEDGEMENT

The valuable assistance of members of the County Solid Waste Advisory Committee who gave generously of their time in considering area-wide solid waste problems at thirty-one committee meetings since February, 1974 is gratefully acknowledged. The Committee which represented each city, East Palo Alto, the South County Garbage and Refuse Disposal District, the scavenger industry, the general public and four county staff elements contributed greatly to the policies and plans recommended in the final report.



# MEMBERSHIP

# SOLID WASTE ADVISORY COMMITTEE

## SAN MATEO COUNTY

| CITY OR AGENCY        | REPRESENTATIVE            | POSITION           |  |
|-----------------------|---------------------------|--------------------|--|
|                       |                           |                    |  |
| Atherton              | D. Kallstrom              | Frivate Citizen    |  |
| Belmont               | B. Trailer                | Assistant Sanitar  |  |
|                       |                           | Engineer           |  |
| Brisbane              | P. F. Goercke             | Councilman         |  |
| Burlingame            | V. A. Mangini             | Vice-Mayor         |  |
| Colma                 | P. C' de Baca             | Private Citizen    |  |
| Daly City             | M. R. Stewart             | Councilman         |  |
| Foster City           | J. McGrew                 | Councilman         |  |
| Half Moon Bay         | J. Marmont                | Councilman         |  |
| Hillsborough          | N. Stiene                 | City Manager       |  |
| Menlo Park            | R. Stephens               | Councilman         |  |
| Millbrae              | V. F. Padovan             | Public Works       |  |
|                       |                           | Director           |  |
| Pacifica              | J. Fulford                | Mayor Pro Tem      |  |
| Portola Valley        | R. H. Anderson            | Councilman         |  |
| Redwood City          | J. S. Williams            | Councilman         |  |
| San Bruno             | L. Van Dusen              | Director of Public |  |
|                       | Za van passi              | Works              |  |
| San Carlos            | C. R. Allen               | City Administrator |  |
| San Mateo             | J. Chalmers               | Councilman         |  |
|                       | A. Bergeron (Alternate)   | Superintendent of  |  |
|                       | iii borgoron (iircornace) | Maintenance        |  |
| South San Francisco   | F. Addiego                | Director of Public |  |
|                       | 1 , 11042050              | Services           |  |
| Woodside              | O. Mayer                  | Councilperson      |  |
| East Palo Alto        | H. Anthony                | Chairman of the    |  |
| Municipal Council     | ii a michony              | Council            |  |
| General Public        | L. Craig                  | League of Women    |  |
| 000141 100111         | 2. 02428                  | Voters             |  |
| Scavenger Industry    | L. J. Devincenzi          | President, San     |  |
| ottonger indubery     | n. o. bovincinal          | Mateo County       |  |
|                       |                           | Scavenger Company  |  |
| South County Garbage  | J. J. Zucca               | District Board     |  |
| & Refuse Disposal     | 3 . J . 2deed             | Chairman           |  |
| District              |                           | Old I I lie I      |  |
| County of San Mateo   | M. D. Tarshes             | County Manager     |  |
| County of San Mateo   | S. H. Cantwell, Jr.       | County Engineer    |  |
| County of San Mateo   | D. A. Woolfe              | Planning Director  |  |
| County of San Mateo   | H. F. Eich                | Public Health      |  |
| country of ban raiceo | 11. 1. 12011              | Engineer           |  |
|                       | P. Duffy (Alternate)      | Vector Control     |  |
|                       | 1. bully (miletimate)     | Specialist         |  |
|                       |                           |                    |  |
|                       | NON-VOTING MEMBERS        |                    |  |
| County of San Mateo   | R. Greene                 | Deputy District    |  |
|                       |                           | Attorney           |  |
| County of San Mateo   | S. A. Armogida            | Project Engineer   |  |



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#### PREFACE

Contained herein is a brief summary of a final report on the Solid Waste Management Plan for San Mateo County which has been prepared in response to Section 66780, California Government Code. It was preceded by a preliminary report dated July, 1975 which was circulated on August 1, 1975 to all local municipal governments and others for review and comments and reflects revisions resulting from the preliminary report review process.

The report contains several important features including:

- 1. An up-to-date "state of the art" solid waste management study.
- 2. A comprehensive analysis and technical study of the present situation within San Mateo County.
- 3. An economic comparison of alternatives and options reasonable for consideration in San Mateo County.
- 4. Recommendations regarding local governmental roles and responsibilities, policies, and plans for processing or disposal-type facilities, resource recovery and financing.
- 5. A final Environmental Impact Report (E.I.R.) for the proposed plan.

The report was prepared by the County Engineering and Road Department in collaboration with the San Mateo County Solid Waste Advisory Committee authorized by the Board of Supervisors by Resolution 32200 adopted November 27, 1973. The recommended policies and plans represent a consensus of views of the Committee members. However, it should be noted that there are several areas of investigation which will require further study.

The proposed solid waste management plan contained in the final report has been submitted to local governing bodies for approval action pursuant to Section 17152, California Administrative Code. When a majority of cities containing a majority of the incorporated-area population have given their approval, the Plan will be forwarded by the County Board of Supervisors to the State Solid Waste Management Board together with any statements of disapproval. Details regarding adoption procedures are included in the report. Copies of the complete report are available to the general public at all branches of the Peninsula Library System.

My office is available to answer any questions regarding the contents of the report.

S. H. CANTWELL, JR.

County Engineer and Road Commissioner County Government Center

County Government Center Redwood City, California

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#### SUMMARY REPORT

## SOLID WASTE MANAGEMENT PLAN FOR SAN MATEO COUNTY

## A. BACKGROUND

More than any time in our past history, the cities and County of San Mateo are experiencing changes in the problems, concepts, controls and management of solid wastes. While solid waste problems encountered in San Mateo County are quite complex, they are not unique to this area or region.

A fundamental public need is the guarantee that safe, environmentally-acceptable disposal services are available without interruption. In addition there is a growing public awareness of the need to conserve natural resources. It follows that effective solid waste management should be oriented toward reducing the amounts of unwanted residues of society by reclamation or recovery of waste products prior to disposal of the remainder with the least nuisance to the public health, to the environment, and at reasonable costs.

Solutions to disposal problems are further complicated because of increasing waste production, declining land availability, fragmented responsibilities and jurisdictions and the need to finance costly systems and facilities on a timely basis.

In the past, local governments and their servicing scavenger companies have dealt with various aspects of solid waste problems as crises were encountered on a local or independent basis. Now there is a growing awareness that a more comprehensive coordinated approach in the search for solutions must be adopted and that public understanding and support is an essential ingredient. As an example many problems arise because of our concerns not to discharge waste materials into the air and water environments. Hence, some final resting places on land are necessary. Also, although the final disposal of wastes may be the most critical or immediate local problem, the possible solutions can best be examined in the larger context of future improvements in the entire waste disposal system which includes production, storage, collection, transport, processing, recovery and final-disposal of waste products.

By resolving immediate problems in light of broader long-range programs, improvements in existing practices can be progressively updated to meet changing conditions as additional problem areas are studied and resolved. Piece-meal solutions may create additional problems in the future and add to the mounting costs of disposal.

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#### B. AUTHORIZATION

Pursuant to the Nejedly-Z'berg-Dills Solid Waste Management and Resource Recovery Act of 1972, Chapter 342 Statutes 1972, the Board of Supervisors, County of San Mateo, in response to requests by a preponderance of city councils, on November 27, 1973, authorized preparation of this report by the Engineering and Road Department.

Simultaneous with authorizing this report, the Board of Supervisors has undertaken, in cooperation with the nineteen cities of the county, to prepare a comprehensive, coordinated county-wide solid waste management plan as required in the state law. In connection thereto, it established a Solid Waste Advisory Committee in November, 1973 and designated responsibilities for developing and coordinating county-wide plans which will be subject to approval by cities.

## C. PURPOSE AND SCOPE OF REPORT

The study is intended to provide information and recommendations relative to solid wastes and management that are considered to be of value to local governmental and state officials in the resolution of existing problems and to private industries and the general public who are affected.

The study area includes the entire San Francisco Bay peninsula north of Palo Alto and south of the City of San Francisco. It is shown on Map I-I in relationship to its regional setting (see enclosure). Except as noted, all county areas are included in the nine-county Association of Bay Area Governments (ABAG) region.

#### D. STUDY PROCEDURE

The county-wide report has been developed through research conducted by the County Engineering Department supplemented by information developed at thirty-one study meetings since February, 1974 of the Solid Waste Advisory Committee representing each city, the scavenger industry, the general public, county staff elements and others.

To provide a framework for subsequent engineering analyses, the report presents an overall perspective of solid wastes, handling and processing systems, and modern solid waste management concepts. Thereafter, existing conditions in San Mateo County including physical, environmental and solid waste characteristics of the study area are explored. The study clearly establishes the inability of existing systems and those facilities under development to satisfy future needs of most areas within the county and to achieve public objectives for resource recovery and conservation. Waste materials which require special handling and several miscellaneous problem areas are identified. Potentials for improving the situation through emerging, resource recovery technologies have been investigated. Also, an engineering-economic analysis prepared by a highly qualified engineering consulting firm is presented to assist in evaluating the feasibility and financial impacts of several

alternative systems anticipated for the future. Assessments derived from the technical studies described above are summarized in Chapter IX of the report. After this information was considered, planning objectives and policies were jointly agreed to by the Solid Waste Advisory Committee and county staff members to guide formulation of proposed action plans. Specific plan elements covering (1) the facilities needed, (2) the resource recovery processes recommended, and (3) methods of financing were then developed for short, intermediate and long-term time periods, and are contained in Chapter X of the report. In addition, the report includes an Environmental Impact Report (EIR) of the proposed county-wide plan and a bibliography of background reports and references used in the current studies.

## E. HIGHLIGHTS OF TECHNICAL ANALYSES

Local communities and private industry in San Mateo County are now confronted with a variety of solid waste management problems which require prompt attention in the overall public interest. Concerted actions involving all local governments and scavenger companies are needed to reduce current uncertainties and to realize benefits that are possible through a coordinated areawide, total-systems approach. Major areas for mutual agreements relate primarily to methods of disposal, the financing and establishment of needed processing or disposal facilities and the designation of inter-governmental responsibilities.

Over 2000 tons of municipal and industrial wastes are being generated daily within San Mateo County and the rate is increasing almost 2% annually. Each person generates about one-half (½) ton of residential wastes per year and a typical household pays about \$45 annually for franchised waste collection services. Currently, the bulk of the wastes are disposed of primarily at conventional landfills. Some recycling or recovery of usable materials is accomplished by commercial sources, manufacturing industries and volunteer recycling projects. Long-range plans should provide for resource recovery type processing and the final disposal of residues of 30,000,000 tons of refuse by the year 2000.

Two types of waste handling systems are currently available for disposal of municipal-type solid wastes at landfill areas. Existing landfills accommodate either "franchise-collected wastes" or wastes delivered directly by individual members of the general public or by communities that provide their own special rubbish collection service. The latter non-franchised collected waste is referred to as "general public dumping". Based upon information available in early 1974, it is estimated that about 56% of wastes delivered to authorized landfills is franchisecollected and 44% is general public dumping. The franchised-collection services are provided by 6 scavenger companies under 25 franchises servicing 19 cities, 3 sanitary districts and 2 county service areas. These wastes are handled at 3 publicly-owned landfills operated by 2 scavenger companies and I special district. A small amount of wastes collected in Woodside and Portola Valley is handled at a private site in Santa Clara County. Some demolition wastes from San Francisco are disposed of in the San Mateo County area at the Town of Colma. General



public dumping service is provided at 5 publicly-owned and 2 privately-owned landfills. With minor exceptions, only one landfill site receives both scavenger collected wastes and general public dumping.

Landfill space in San Mateo County is becoming increasingly critical. The Mussel Rock site in Daly City is the only existing landfill in the county with a remaining long-term capability. Only two new landfills are in the development stage. One large privately-owned site at Ox Mountain is nearing completion as a replacement for two facilities located at Marsh Road in the City of Menlo Park. The other is a small rural site at Pescadero designed to handle only the surrounding rural area. Of 17 landfill sites in existence in 1962 or opened since that time, only 9 are still active. Six (6) of the eight (8) sites closed were used for disposal of franchise-collected residential wastes. Within 4 to 5 years, 2 of the remaining 3 sites used by scavenger companies are expected to terminate, thereby having a direct impact on 13 cities on the Bay-side of the county and the City of Half Moon Bay. Also, within 1 to 3 years, 5 of the 7 sites currently providing direct disposal service to the general public are expected to cease operations.

Engineering studies regarding capabilities of existing and developing facilities indicate the following:

- (1) Neither complete reliance on landfill disposal nor the complete elimination of sanitary landfills is warranted in light of new resource recovery technologies that are now undergoing development and testing. Also, some landfill capacity must be available on a long-term basis for non-processible wastes and waste residues and as a contingency in the event of interruptions in future resource recovery systems caused by plant breakdowns or marketing difficulties;
- (2) The convenience of general public dumping service will soon end in most areas unless municipalities provide replacement facilities for local citizens such as public rubbish collection points (small volume transfer stations);
- (3) The anticipated lifetime of the Corinda los Trancos canyon portion of Ox Mountain which is now approaching final development and approval may terminate sometime between 1984 and 1989 and is insufficient for long-term needs;
- (4) Provided that a second canyon (Apanolio Canyon) is reserved for disposal purposes, the Ox Mountain landfill area can operate until 1998 without extensive resource recovery processing, but can be extended an additional twenty-five years until about 2023 if full-scale resource recovery processing is initiated in the vicinity of Redwood City by 1985;
- (5) There is no Bay Area regional plan sufficiently advanced at this time or that could be adopted and implemented on a timely basis to meet local needs for those facilities that are needed in San Mateo County in the immediate (short-term) future. However, such



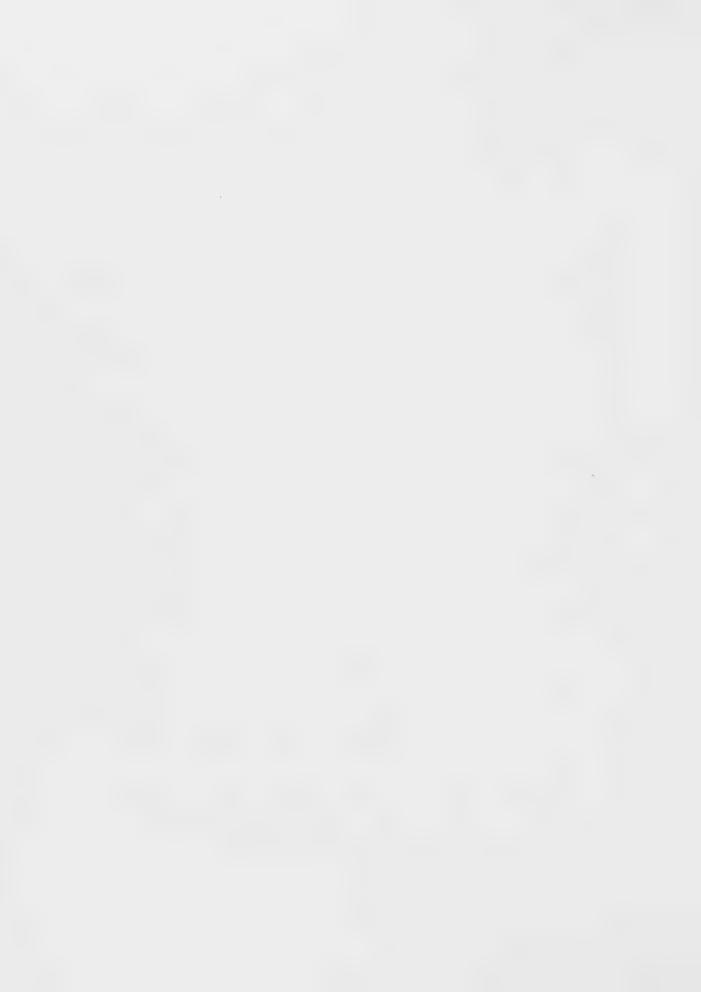
- facilities can later be integrated into whichever Bay Area reresource recovery system may eventually be adopted; and
- (6) There are no landfill facilities in San Mateo County suitable for disposal of hazardous wastes (Group 1 wastes) nor are any such facilities currently being planned. However, three landfills (Class I) are currently available in Contra Costa County through commercial channels for disposal of hazardous wastes produced in the Bay Area. A more dependable plan which can best be assured by the State is needed.

Reductions in quantities of wastes which require landfill disposal can be achieved by a variety of resource recovery methods which can not only reduce requirements for landfill space, but enable some usable waste materials to be recycled and other waste materials to be converted into by-products which may be economically marketable. Although full-scale resource recovery systems will require high capital investments, economic trends for the future indicate that operating costs for the needed facilities and systems, when credited with revenues from marketable by-products, may become competitive with conventional landfill system costs.

Preliminary economic investigations have been completed for a variety of recovery systems and situations as applied to San Mateo County. In view of uncertainties, conditions and assumptions for several system-models were established for study purposes. The alternate systems and methods studied included the following: conventional landfill; diversion of demolition materials to land reclamation; home separation of newspapers; hand sorting of recyclable materials at transfer stations, public rubbish collection points, and volunteer recycling projects; mechanical front-end materials recovery of ferrous metals; incineration producing steam for thermal energy or for electrical power generation; Bay-Delta composting plan; and methane recovery from landfills. For comparative cost analyses, three basic options for applying alternatives within the county-wide area have been investigated for short (1975-1979), medium (1980-1989), and long-term (1990-2000) time periods.

- Option I Conventional landfill system throughout the County.
- Option II Alternative resource/energy recovery processes applied to Collection Service Area "E" only.

  This area includes all areas provided franchised collection services by the San Mateo County Scavenger Company.
- Option III Alternative resource/energy recovery processes applied to entire Disposal Service Area No. 3. This adds those areas provided franchised collection services by South San Francisco and San Bruno Scavenger Companies.



A summary of costs for waste handling and processing alternatives that can be anticipated at this time is included in Table IX-1 of the report. Capital investments ranging from \$7,220,000 to \$8,720,000 will be required during the period 1976 to 1979 for facilities that are needed now for short-term purposes and will still be needed for any known long-term alternative that may be selected at a later date. Total capital investments for medium and long-term needs, anticipating a full-scale resource recovery facility in the vicinity of Redwood City by 1985, can range from \$31,000,000 to \$57,000,000 depending upon the option and alternative chosen. On a county-wide basis, net unit costs per ton of refuse currently handled throughout the entire collection, transportation, processing and disposal systems are estimated at about \$19.00 per ton. It should be noted that this average cost figure of \$19.00 per ton includes no collection or transportation costs for the non-franchise collected refuse (44% of total) delivered directly to disposal or transfer facilities by individual members of the public, businesses, industries or communities. Comparative costs for materials or energy recovery systems may become competitive depending on the alternative selected and the marketability of saleable materials and by-products. Of the full-scale resource recovery systems studied, it appears that incineration with steam generation is the least cost alternative, but may not be suitable for the local area. Pyrolysis producing synthetic gas may prove to be the most acceptable long-term alternative. The Bay-Delta compost plan appears to be the most expensive option for the county, but may require the least initial local capital investment of about \$31,000,000 to \$36,000,000.

# F. HIGHLIGHTS OF RECOMMENDED PLAN

Detailed recommendations for a coordinated county-wide action plan are contained in Chapter X of the report. The principal features based upon objectives and policies derived from comprehensive studies included in the report consist of a facilities plan, a resource recovery plan and a financing plan (see enclosed Tables X-1, X-2 and X-3). Locations of both existing and projected facilities, keyed to significant years, are shown on a series of maps (see enclosed Maps X-1 to X-6 inclusive).

The following policy assumptions were agreed upon by the Solid Waste Advisory Committee to guide development of the proposed facilities, resource recovery and financing plans.

- (1) That the County Board of Supervisors be the lead agency to coordinate the planning, implementation and management of solid waste disposal activities of county-wide interest on a continuing basis.
- (2) That within their respective jurisdictional areas, the county and city governments retain jurisdictional authority and responsibility for litter control and collection activities and for transfer, processing or final disposal facilities located therein

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with the understanding that all new facilities which conform to the county-wide plan as adopted or as may be amended.

- (3) That within its own jurisdiction, each city and the county shall be committed as follows:
  - a. To approve the location of and permits for transfer and processing facilities as indicated in the solid waste management plan;
  - b. To terminate existing conventional landfill facilities in an orderly manner as indicated in the plan;
  - c. To review its policies regarding storage and collection standards and financing of collection services to satisfactorily meet requirements of the local health officer pertaining to health and sanitation;
  - d. To adopt and enforce standards for solid waste handling and disposal which are equal to or stricter than the minimum state-wide standards; and
  - e. To determine what level of general public dumping service, if any, is to be provided for its residents and to make such arrangements as may be required, whether within or outside of its own area.
- (4) That transfer or processing facilities other than research projects be based on technology that is either proven or sufficiently close to operational feasibility to be reliably predictable.
- (5) That resource recovery efforts by the private sector through separation of materials at the source, through hand sorting or mechanical front end separation at transfer facilities, through methane recovery at landfills, through energy recovery or other waste conversion, and through reclamation of completed landfill sites whenever practical or feasible be encouraged by all governmental agencies.
- (6) That reduction in the volume of all wastes be encouraged through information provided to the public and industry by the plan administrator and through the use of governmental specification and other purchasing capabilities to expand the market for recycled materials.
- (7) That conservation of Class II sanitary landfill space be encouraged through the processing of demolition wastes for ferrous metal recovery or for reuse as construction materials or as fill material in land development and improvement projects.



- (8) That the County seek assurance from the State that Class I disposal facilities will be available for the County of San Mateo as may be required to adequately protect the environment and the public interest.
- (9) That the County undertake a positive program of data collection to document the source, nature and magnitude of Group 1 waste production in the county to be completed by June 30, 1977.
- (10) That, with respect to Corinda los Trancos Canyon, development be continued by the owner subject to conditions of the use permit and related agreements between the owner and the County Board of Supervisors consistent with the adopted plan.
- (11) That Group 2 municipal-type wastes produced in San Mateo County and delivered in accordance with the adopted plan by public agencies, their servicing scavenger companies or the general public, shall be accepted at new landfill, transfer or processing facilities (not including public rubbish collection points) on an equal, non-discriminating basis.
- (12) That designations of collection or disposal service areas in the county-wide plan shall not infringe upon existing rights of any city government or other authorized governmental agency to terminate franchises or to change franchisees.
- (13) That after approval of the solid waste management plan, no one is to establish solid waste disposal, transfer stations, waste processing, or resource recovery sites that are not in conformance with the plan.
- That the County Board of Supervisors designate (a) the Engineer-(14)ing Department as having primary staff responsibility for plan administration, keeping abreast of solid waste technology, and technical liaison with elements of local, state and federal governments, private enterprises and civic groups concerned with solid waste management, (b) the County Public Health and Welfare Department as having staff responsibility for providing inspection and for enforcing state and local statutes and regulations in the environmental health and sanitation aspects of storage, collection, handling, transporting and disposal of solid wastes on a county-wide basis, and for developing code changes, conducting studies and recommending improved methods in those subject areas to the county or cities in the county, (c) the Planning Department and Commission having the responsibility for maintaining the Solid Waste Management Plan as an element of the County General Plan insofar as the plan relates to the unincorporated area.
- (15) That the status of the county-wide solid waste program be reviewed annually by the County Board of Supervisors and the adopted



solid waste management plan be updated as needed and at least every three years. Significant changes to the approved plan shall be recommended to the Board of Supervisors by the Regional Planning Committee. A representative of the scavenger industry should be included as an ad hoc member of any RPC subcommittee charged with reviewing changes to the plan. Significant changes shall be referred to cities by the Board of Supervisors and be subject to approval by both a majority of cities containing a majority of the population of the incorporated area of the county and by the County Board of Supervisors.

The proposed facilities plan (see Table X-1) relates directly to recommended resource recovery systems for various areas of the county. All existing landfills, except Mussel Rock in Daly City and two sites in Colma are expected to be terminated within 4 years. As previously stated, only the privately-owned Ox Mountain facility and a small rural facility in Pescadero are currently being prepared for future long-term use. A major privately-owned transfer-processing facility proposed to be located in the vicinity of Redwood City is a key element of the plan. The plan also visualizes establishment of several public rubbish collection points located at or near existing landfills which are to be terminated. They represent the minimum number of facilities needed to continue the convenience of general public dumping services. However, the proposed plan does not preclude cities from establishing additional similar facilities to better serve local residents.

Details concerning resource recovery activities, keyed to various locations and time-periods, are contained in the proposed Resource Recovery Plan (Table X-2). An analysis of maximum theoretical reductions of materials now going to landfills indicates that about a 61% reduction may be achieved through full-scale resource recovery technologies anticipated to be applied in heavily populated areas by 1985. An additional reduction of 16% may be possible by recycling or diverting demolition type wastes from the major landfills to beneficial land development or reclamation uses. However, not all waste products from all areas of the county can reasonably be considered to be susceptible to maximum recovery processing. The proposed plan considers and proposes that other than full-scale recovery systems be encouraged pending final selection as to which particular long-range system may prove to be most advantageous for the future. Full implementation of the plan may largely depend upon the sale of materials and by-products to at least off-set costs of processing operations.

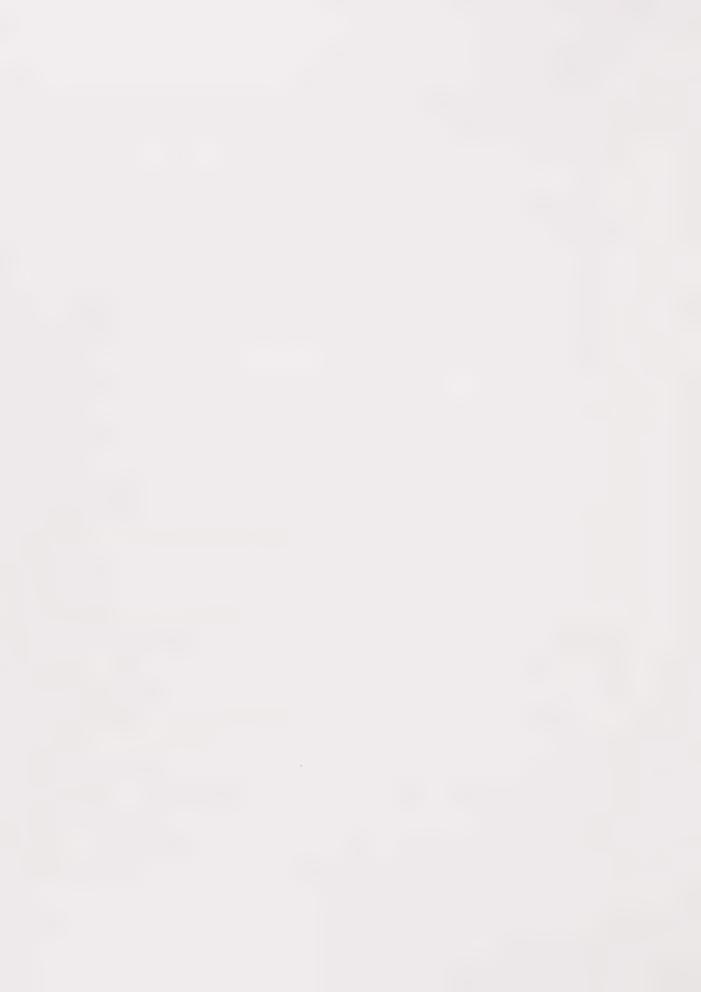
The financing plan proposed in Table X-3 of the report is based primarily upon "pay as you go" financing from collection fees and user charges to defray operating costs including capital amortization. It provides flexibility to local governments for the financing of initial capital investments through either public or private sources.

#### G. ADDITIONAL STUDIES

Although commitments are needed at this time for establishing and implementing the initial phases of the county master plan, additional studies will be needed to provide more complete and updated information to local decision-makers for the longer range aspects of the master plan.

The State is now in the process of sponsoring additional comprehensive solid waste management and resource recovery studies and demonstration programs which will provide considerable information to local governments and to collection and disposal private enterprises. However, local studies by both public and private sectors can be anticipated to resolve remaining problems in the local study area and to verify or evaluate State-sponsored studies for applicability to the local setting and situation such as waste characteristics, marketability of recovered materials and cost-benefit comparisons. Some of these studies should be undertaken in conjunction with ABAG on a Bay Area regional basis. Specific areas for future consideration at appropriate times should include the following:

- (1) Adequacy of the environmental health and sanitation aspects of the State-wide minimum storage and collection standards.
- (2) Medium and long-term prospects for out-of-county disposal of hazardous wastes at approved Class I facilities.
- (3) Timely resolution of short, medium or long-term uncertainties pertaining to a transfer-processing facility in the vicinity of Redwood City and to Ox Mountain facilities and to general public dumping facilities.
- (4) Continuing evaluations regarding the "state of the art" and the long-range alternatives for resource recovery systems, including energy recovery and the Bay-Delta concept.
- (5) Investigations regarding the economic feasibility of methane gas recovery from the Mussel Rock (Daly City) and Corinda los Trancos Canyon landfills.
- (6) Updating of local solid waste management ordinances as may be required.
- (7) Regional marketing for reclaimed materials.
- (8) Investigation of economic and environmental implications of the volume of general public dumping in San Mateo County.
- (9) Investigation of alternatives, costs and benefits for transferring and processing of refuse from North San Mateo County.
- (10) Resolution of roles and responsibilities of special districts



in solid waste management.

(11) Investigations of impacts of public rubbish dumping test at the Ox Mountain site.

## H. PRELIMINARY REVIEW PROCESS

The final report was preceded by a preliminary report dated July, 1975 which was provided for review purposes to all cities and other agencies and parties interested in either the Solid Waste Management Plan or the draft Environmental Impact Report (E.I.R.) contained therein. Copies of all comments received have been included in the final report for informational purposes. Evaluation of these comments by both the County Engineering Department and members of the Solid Waste Advisory Committee has resulted in numerous changes to the preliminary report in completing both the solid waste management and the environmental impact features of the final report.

In addition to reviews of the preliminary report by cities, the County Board of Supervisors was briefed upon the contents of the preliminary report and considered testimony at meetings open to the public on August 14th and September 11th. Pursuant to instructions of the County Board of Supervisors, a special hearing of the Board was held on September 23rd regarding the Class I disposal problem area. Also, on September 24, 1975, the San Mateo County Planning Commission held a public hearing on the draft E.I.R., finding the draft to be adequate and referring comments to the Engineering Department for response. As a result of further reviews and changes by staff personnel of the County Engineering and Planning Departments, the completed final report of the Solid Waste Management Plan now incorporates a final Environmental Impact Report. Its basic conclusion is that the adoption of the proposed county-wide plan will lead to some adverse environmental impacts but, nevertheless, the plan will be of significant benefit to the cities and population of San Mateo County by improving local solid waste management planning and by enabling progression toward full-scale resource recovery.

#### I. PLAN ADOPTION PROCEDURES

In accordance with State guidelines for completing and adopting county-wide solid waste management plans, the plans are now required to be submitted to the State Solid Waste Management Board by January 1, 1976. However, the State Solid Waste Management Board has also recommended that each city be allowed sixty days to either officially approve or disapprove the proposed final plan. (Approval by a majority of cities containing a majority of the population of the incorporated area of the county is required for adoption). In order to allow the time needed by city and county governing bodies, the mandated deadline of January 1, 1976 cannot be met. Based upon an assumption that the final report can be published in early December, 1975, it appears that it can be processed within the county government for submission to the State during the month of February, 1976.



Prior to submission to the State, the following actions will be required:

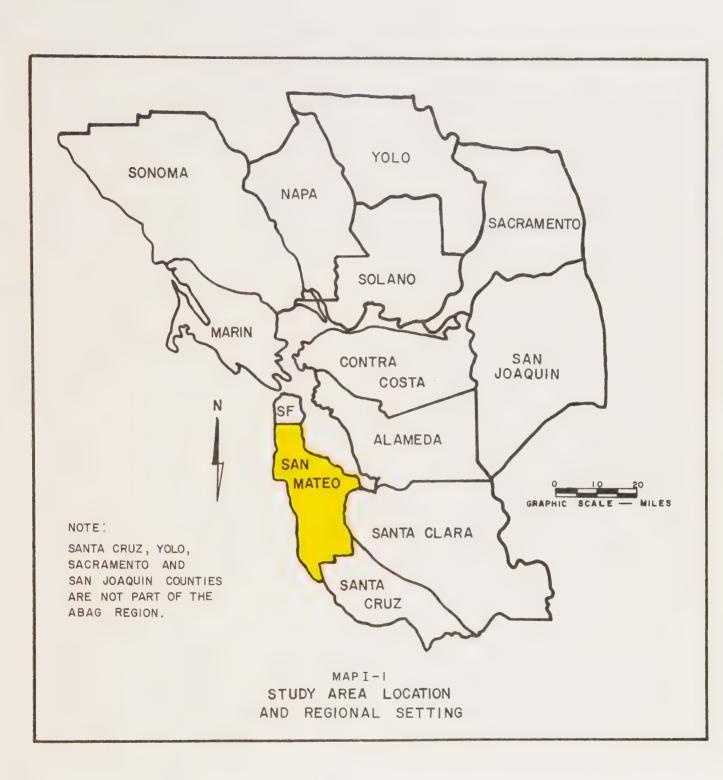
- (1) Cities must either approve or disapprove the proposed plan within 60 days of receipt. Approval actions shall be in the form of resolutions by City Councils. The resolutions must stipulate concurrence in the following: (a) the objectives set forth in the plan, (b) the method and organization for implementation of the programs contained in the plan, (c) the procedures for financing the recommended solid waste management program, and (d) the role identified in the plan for the city in implementing this cooperative effort for management of solid wastes in an economical and environmentally acceptable manner.
- (2) Where a city disapproves the proposed plan, the city shall notify the county stating its reasons for such disapproval. Such information must then be provided by the county to the State Board.
- (3) Subject to acceptance of the Solid Waste Management Plan by a majority of cities containing a majority of the population in the incorporated areas, a public hearing must be held by the County Planning Commission for recommendation to the County Board of Supervisors as to suitability of the proposed plan as an element of the County General Plan.
- (4) The County Board of Supervisors must then consider the actions taken by cities and take such action on the proposed plan as may be considered appropriate to include (a) certification that the E.I.R. has been completed in compliance with the California Environmental Quality Act, (b) determination whether or not the project is approved as a part of the land-use element of the County General Plan, and (c) submission of its findings regarding the plan and all city responses relative thereto to the State Solid Waste Management Board for review as to conformance with State policy with a copy to the Association of Bay Area Governments (ABAG).

A sample resolution for city concurrence in the Solid Waste Management Plan for San Mateo County is contained as Appendix R in the final report (see enclosure).



ENCLOSURES





#### TABLE X-1

### PROPOSED FACILITY PLAN FOR

#### SAN MATEO COUNTY

| <b>4</b>   | Short Term<br>1975-1979  |  | Medium Term<br>1980-1989   |   | Long Term<br>1990-2000  |  |
|--|--|--|--|---|---|--|
| 1974   | 1976   | 1978   | 1980   | 1984  | 2000  |  |
|  |  | <u>L.</u>  | ANDFILLS   |   |   |  |
| Daly City Colma (J.S.) Colma (H) Burlingame San Mateo Menlo Park Pescadero Half Moon Bay | Daly City Colma (J.S.) Colma (H) Burlingame San Mateo Menlo Park Pescadero Half Moon Bay Ox Mountain | Daly City Colma (J.S.) Colma (H) Menlo Park Pescadero Ox Mountain          | Daly City Colma (J.S.) Colma (H) Pescadero Ox Mountain                                 | Daly City<br>Colma (J.S.)<br>Colma (H)<br>Pescadero<br>Ox Mountain                              | Pescadero<br>Ox Mountain  |  |
|  |  | TRANSFER-PRO   | OCESSING STATIONS  | 3   |   |  |
| S. San Fran.*<br>San Bruno   | S. San Fran.<br>San Bruno  | S. San Fran.<br>San Bruno  | S. San Fran.<br>San Bruno<br>Redwood City  | S. San Fran.<br>San Bruno<br>Redwood City   | S. San Fran.<br>San Bruno<br>Redwood City<br>Daly City  |  |
|  |  | PUBLIC RUBBIS  | H COLLECTION POIN  | NTS   |   |  |
| Belmont  | Belmont<br>Pacifica<br>Colma   | Belmont<br>Pacifica<br>Colma<br>Half Moon Bay**<br>Burlingame<br>San Mateo | Belmont<br>Pacifica<br>Colma<br>Half Moon Bay<br>Burlingame<br>San Mateo<br>Menlo Park | Belmont Pacifica Colma Half Moon Bay Burlingame San Mateo Menlo Park Woodside or Portola Valley | Belmont Pacifica Colma Half Moon Bay Burlingame San Mateo Menlo Park Woodside or Portola Valley |  |

NOTE: Indicates facilities in these approximate locations projected for the year as shown.

 $<sup>\</sup>star$ Public rubbish collection service is now being provided at the South San Francisco Scavenger Company Transfer-Processing Station.

<sup>\*\*</sup>Due to the close proximity of the Ox Mountain landfill to the City of Half Moon Bay, general public dumping services can be provided either directly at the landfill site or at an off-site location. The former solution will add to traffic on Highway 92. The other will add to user disposal charges. The City Council has indicated its desire to test the situation before a final decision to establish an off-site public rubbish collection point is made. Consequently, development of a separate public rubbish facility in the City of Half Moon Bay is optional and subject to future consideration by the City Council.

#### PROPOSED RESOURCE RECOVERY PLAN for

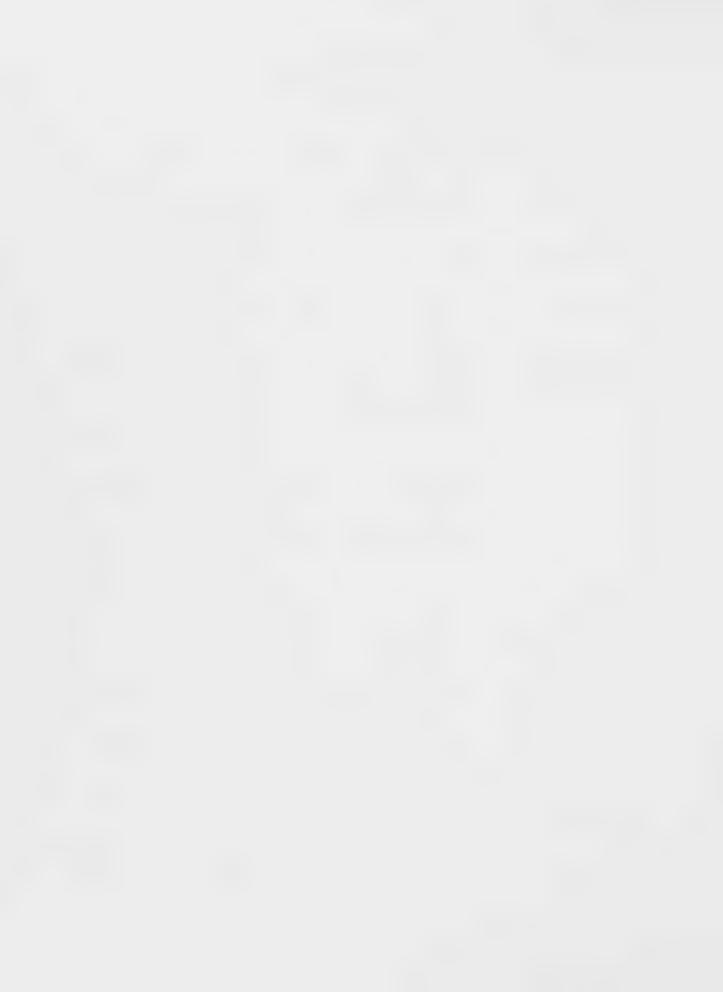
SAN MATEO COUNTY

| YEAR          | METHOD   | LOCATIONS   | REMARKS  | TERM                     |
|---------------|--|---|--|--------------------------|
| 1976          | Voluntary Recycling  | Local Volunteer Recycling Projects (see Table IV-4)   | As established on a volunteer basis  | 4                        |
| 1976          | Voluntary Recycling  | Public Rubbish Collection<br>Points at Pacifica and Colma   | Municipally or<br>Privately Sponsored  |                          |
| 1976          | Hand Sorting of Resaleable materials   | Transfer-Processing<br>Stations   | Goal for recovery 6%   |                          |
| 1976          | Methane Gas Recovery<br>from Landfill  | Daly City (Mussel Rock) Corinda Los Trancos (Ox Mountain)   | Owners to investigate economic feasibility of a self-sustaining operation. If practical, development of needed facilities should be initiated at the appropriate time. | Short Term 1975-1979     |
| 1978          | Home Separation of<br>Newspapers   | Individual residences   | Goal to reduce residential wastes by 15%. Can be collected separately either by franchised collector or by volunteer collection activities                             |                          |
| 1978          | Voluntary Recycling  | Public Rubbish Collection<br>Points at Burlingame, San<br>Mateo and Half Moon Bay   | Municipally Sponsored  |                          |
| 19 <b>7</b> 8 | Diversion of a major<br>portion of demolition<br>materials from Class<br>II landfills      | Diverted to approved land developments or land reclamation projects or to commercial activities for recycling of saleable materials | Goal to conserve Class<br>II landfill space by<br>16%  | V                        |
| 1980          | Recovery of marketable products utilizing a front-end materials recovery system            | Transfer-Processing Station in<br>Redwood City Area   | Goal to reduce residential and commercial wastes from collection service Area "E" by 13%   | Medi<br>1980             |
| 1980          | Voluntary Recycling  | Public Rubbish Collection<br>Point at Menlo Park  | Municipally Sponsored  | Medium Term<br>1980-1989 |
| 1984          | Voluntary Recycling  | Public Rubbish Collection<br>Point at Colma and at<br>Woodside or Portola Valley  | Privately Sponsored at<br>Colma. Municipally Spon-<br>sored at Woodside or P.V   | -                        |
| 1985          | Energy Recovery through<br>rear-end processing of<br>non-recyclable Group 2<br>type wastes | In conjunction with processing activities of the transfer-<br>processing facility in the<br>Redwood City area                       | Goal to reduce residentiand commercial tonnages from the Service Area by 70%.  |                          |

## TABLE X-3 PROPOSED FINANCING PLAN

# SOLID WASTE MANAGEMENT SYSTEMS SAN MATEO COUNTY

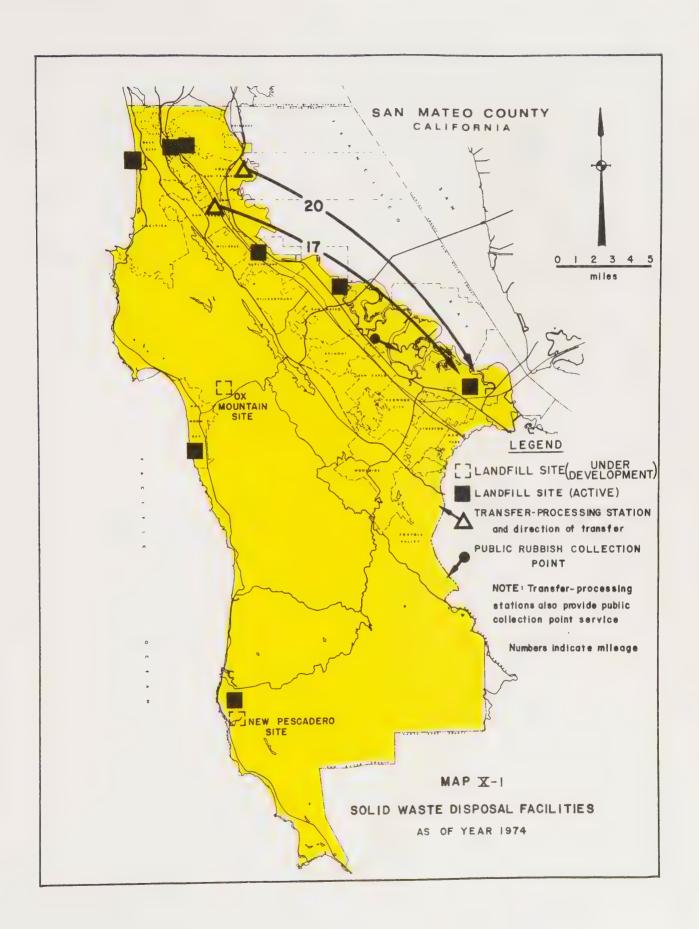
|   |   | TYPE OF              |   |
|---|---|----------------------|---|
| FACILITY OR ACTIVITY  | ASSUMPTIONS   | FINANCING            | METHOD  |
| Franchised Collection<br>Systems and Services   | Private Ownership<br>and Operations   | Private              | Recovery through user collection<br>fees or through service district<br>charges (East Palo Alto).   |
| Municipal Collection<br>Systems and Services  | Public Ownership<br>and Operations<br>(City)  | Public               | General Fund.   |
| Volunteer Recycling<br>Centers  | Private or Public<br>Ownership and<br>Operations  | Private<br>or Public | Recovery costs through revenue from resale of recycled materials.   |
| Public Rubbish Collec-<br>tion Points Including<br>Land, Facility Devel-<br>opment and Operations | Public Ownership Publi (Cities at following locations: Belmont, Burlingame, San Mateo, Menlo Park, Woodside |                      | Financing of capital investments as determined by cities which may include advance financing by private collectors.   |
|   | or Portola Valley   |                      | Recovery of operating costs<br>through user disposal charges<br>or collection franchise arrange-<br>ments.  |
|   | Private Ownership<br>at Colma   | Private              | Recovery of operating costs through user disposal charges.  |
|   | Private or Public<br>Ownership at Half<br>Moon Bay and Pacific  | Private<br>or Public | Financing of capital investments as determined by city and County.  |
|   | Thom buy and ractific   | a                    | Recovery of operating costs through user disposal charges supplemented by governmental subsidy if required at H.M.B.  |
| San Bruno and South<br>San Francisco Transfer-<br>Processing Stations                             | Private Ownership   | Private              | Recovery through user collection fees.  |
| Redwood City Transfer-<br>Processing Station  | Private Ownership   | Private              | Advance financing of capital investments by operator with public financial assistance if necessary.  Recovery of costs through user collection fees and revenues from resource recovery activities. |
| Landfills at Daly<br>City, Burlingame,<br>San Mateo and Menlo                                     | Public Ownership<br>(City)  | Public               | Advance financing of capital investments by operator.   |
| Park  | Private Operation   |                      | Recovery of capital and operating costs through user disposal charges to be reflected in collection fees for franchised collected refuse.   |

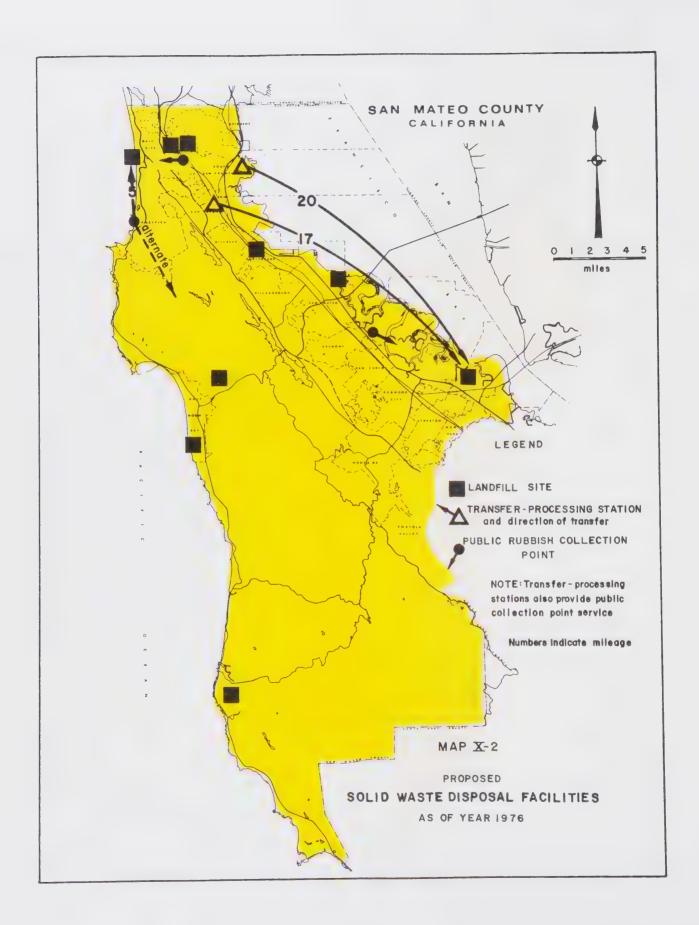


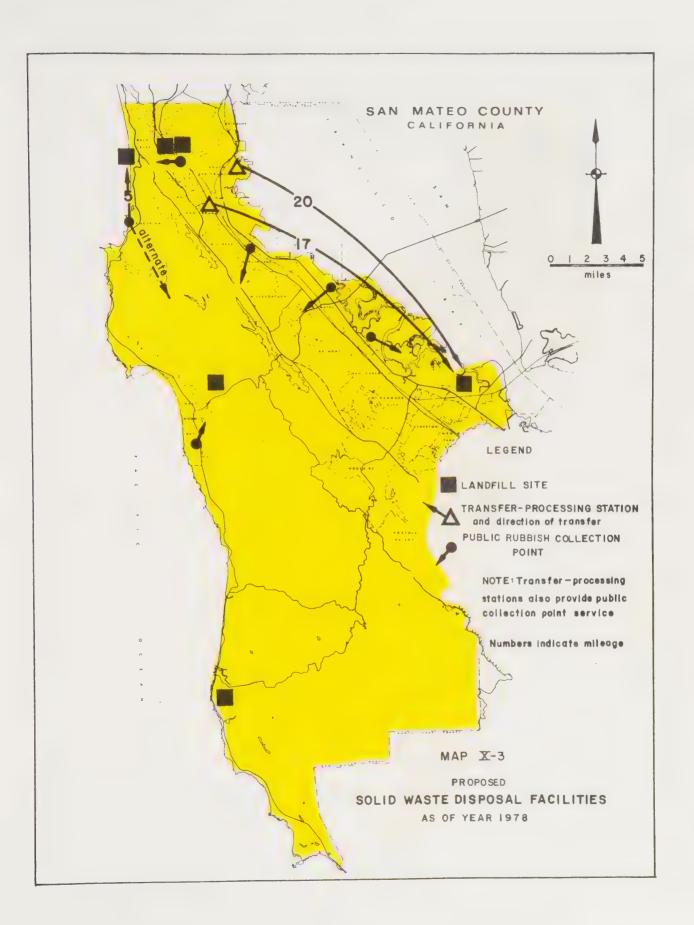
#### TABLE X-3 (Continued)

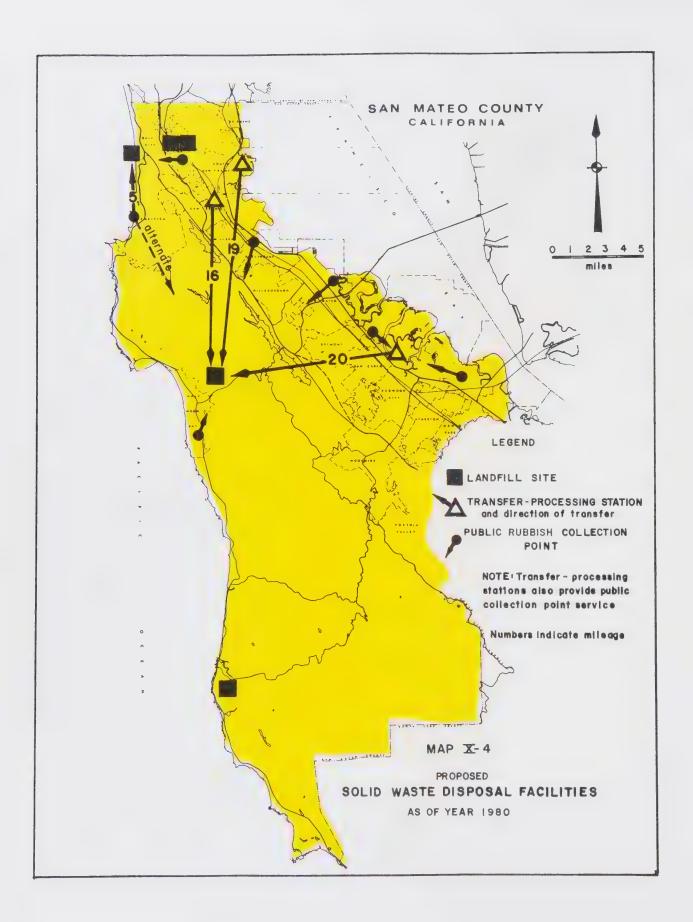
| FACILITY OR ACTIVITY  | ASSUMPTIONS   | TYPE OF FINANCING    | METHOD  |
|---|---|----------------------|---|
| Colma Landfills   | Private Ownership   | Private              | Recovery of costs through disposal charges and revenues from recovery activities.   |
| Pescadero Landfill  | Public Ownership (County)   | Public               | Financing of capital invest-<br>ments from County General Fund.   |
|   | Private Operation   |                      | Recovery of operating costs through combination of user charges and governmental subsidy.   |
| Ox Mountain Landfills Including Corinda los Trancos Canyon and Apanolio Canyon (Subject to Approval of a Disposal Permit) | Alternate A Private Ownership and Operation   | Private              | Advance financing of capital investments by private owner. Recovery of investment and operating costs through disposal charges except for land amortization. Disposal charges to be reflected in collection fees for franchise-collected refuse.                      |
|   | Alternate B Public Ownership (County) Private Operation   | Public               | Capital investment for site acquisition to include Apanolio Canyon to be publicly financed by the County under the following alternatives:  |
| element of the acquisition of   | the Park and Open Space general plan, eventual the two Ox Mountain own for park and open        |                      | <ul> <li>(a) "Pay as you go" financing from surcharges on the disposal charge at the Corinda los Trancos operation.</li> <li>(b) Revenue sharing funds.</li> <li>(c) Park acquisition funds.</li> <li>(d) County General Fund.</li> <li>(e) Revenue bonds.</li> </ul> |
| Areawide Planning and Investigations  | County Government Responsibility for Coordinating Both the Planning and the Necessary Financing |                      |   |
| (a) Staffing  |   | Public               | County General Fund   |
| (b) Special technical studies and investigations  |   | Public<br>or Private | "Pay as you go" financing such as:  (a) Apportionment to city and County General Funds (b) County General Fund (c) Private financing under appropriate circumstances.   |

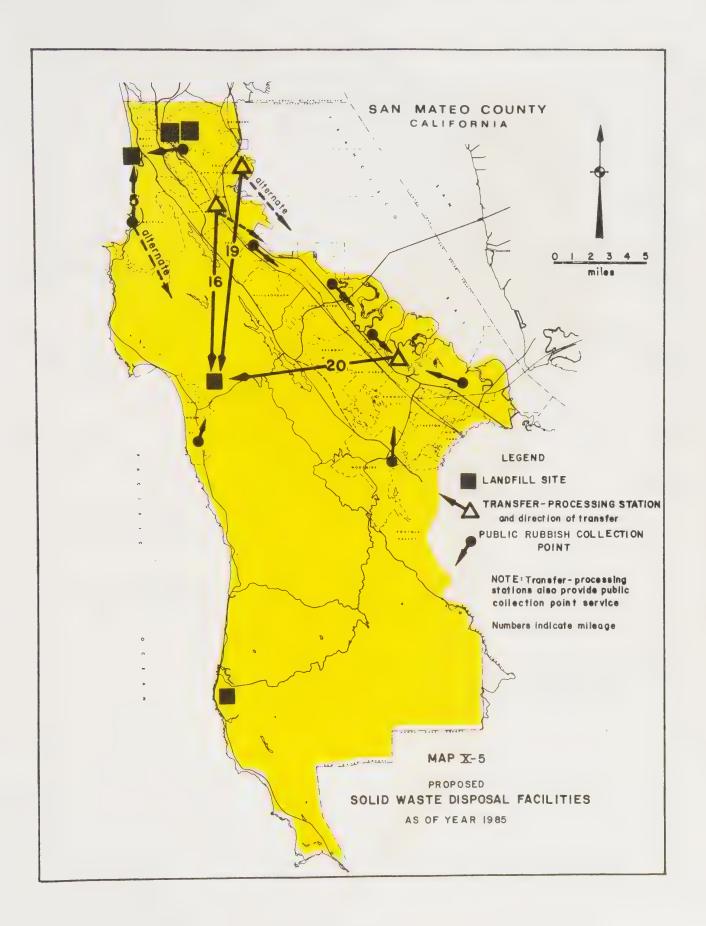


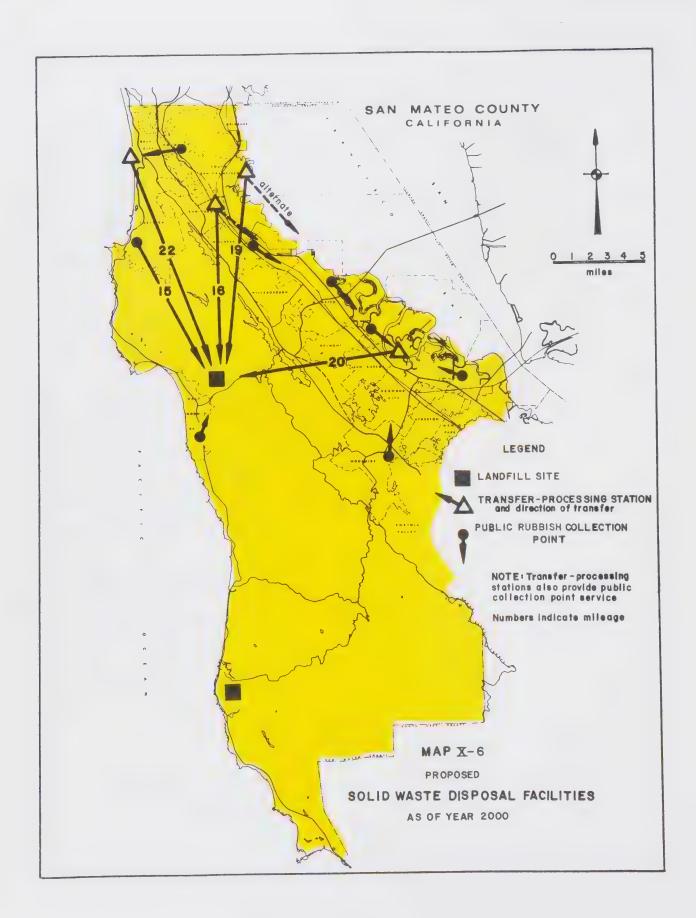












#### APPENDIX R

#### (SAMPLE)

#### RESOLUTION CONCURRING IN

#### THE SOLID WASTE MANAGEMENT PLAN

#### FOR SAN MATEO COUNTY

WHEREAS, the Nejedly-Z'berg Dills Solid Waste Management and Resource Recovery Act of 1972 (hereafter referred to as the Act) requires each County in cooperation with affected local jurisdictions, to prepare a comprehensive, coordinated Solid Waste Management Plan consistent with State policy; and

WHEREAS, said Act also requires that the County Solid Waste Management Plan shall be subject to the approval by a majority of the cities within the County which contain a majority of the population of the incorporated area of the County; and

WHEREAS, following approval by a majority of the cities within the County of San Mateo, the County Board of Supervisors on November 27, 1973 adopted Resolution No. 32200 directing that the County would undertake development of a county-wide Solid Waste Management Plan and authorizing establishment of a Solid Waste Advisory Committee to review and coordinate the plan; and

WHEREAS, the Solid Waste Advisory Committee consisting of representatives from each city, East Palo Alto, South County Garbage and Refuse Disposal District, scavenger industry, general public and County staff elements has held thirty-one meetings since February, 1974 to consider solid waste problems on a coordinated basis; and

WHEREAS, a Solid Waste Management Plan for San Mateo County in conformance with the Act has now been completed through joint efforts of the County and the Solid Waste Advisory Committee; and

WHEREAS, on

the plan has been submitted to this Council for approval;

| Now THEREFORE BE IT RESOLVED that the City Council of the City of                                     |
|---|
| has reviewed said plan and hereby specifically stipulates concurrence in the following: (a) the       |
| objectives set forth in the plan, (b) the method and organization for implementation of the programs  |
| contained in the plan, (c) the procedures for financing the recommended solid waste management        |
| program, and (d) the role identified in the plan for the City in implementing this cooperative effort |
| for management of solid waste in an economical and environmentally acceptable manner.                 |



